

U.S.S.N. 10/643,043 (DP-308268) - 2**LISTING OF THE CLAIMS:**

1. (previously presented) An electronic assembly comprising:
a housing member comprising a heat-conductive member;
a substrate supported by the housing member, the substrate having
conductors on a surface thereof;

a circuit device mounted to the substrate with solder connections on
a first surface of the device that are registered with the conductors on the
substrate, the device having a second surface oppositely disposed from the first
surface; and

a solder joint consisting essentially of an indium preform into which
one or more alloying constituents have diffused to increase the melting
temperature of the solder joint above that of the indium preform, the solder joint
bonding the second surface of the device to the heat-conductive member; and

an overmold compound that encapsulates the substrate, the device,
and the solder joint on the housing member, the overmold compound having a
cure temperature approximately equal to the melting temperature of indium but
less than the melting temperature of the solder joint so as to enable curing of the
overmold compound without adversely affecting the bond formed by the solder
joint between the device and the heat-conductive member;

wherein a thermally-conductive lubricant means is not present
between the second surface of the device and the heat-conductive member.

2. (canceled)

3. (original) The electronic assembly according to claim 1, wherein
the solder joint comprises indium and at least one of gold and silver in an amount
of up to 0.5 weight percent.

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4. (original) The electronic assembly according to claim 1, wherein the solder joint comprising indium and at least one of nickel, nickel-gold alloy, tin, and tin alloy in an amount of up to 0.5 weight percent.

5. (original) The electronic assembly according to claim 1, wherein the solder joint consists essentially of indium, at least one of gold and silver in an amount of up to 0.5 weight percent, and at least one of nickel, nickel-gold alloy, tin and tin alloy in an amount of up to 0.5 weight percent.

6. (previously presented) The electronic assembly according to claim 1, wherein the melting temperature of the solder joint is below the melting temperature of the solder connections.

7. (previously presented) The electronic assembly according to claim 1, further comprising a structural adhesive bonding the substrate to the housing, the structural adhesive having a cure temperature approximately equal to the melting temperature of indium but less than the melting temperature of the solder joint so as to enable simultaneous curing of the structural adhesive and the diffusion of the one or more alloying constituents into the indium preform.

8. – 9. (canceled)

10. (original) The electronic assembly according to claim 1, wherein the heat-conductive member is a pedestal protruding from the housing member.

11. (original) The electronic assembly according to claim 1, wherein a portion of the housing member defines the heat-conductive member.

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12. (original) The electronic assembly according to claim 1, wherein the assembly lacks any biasing means that contacts a surface of the substrate opposite the device and urges the device into contact with the heat-conductive member.

13. (previously presented) An electronic assembly comprising:
a housing having an interior region;
a heat-conductive pedestal projecting into the interior region of the housing;
a laminate substrate within the interior region of the housing and supported by the housing, the substrate having conductors on a surface thereof;
a circuit device mounted to the substrate with solder connections on a first surface of the device that are registered with the conductors on the substrate, the device having a second surface oppositely disposed from the first surface; and
a solder joint consisting essentially of an indium preform into which at least one alloy constituent has diffused to increase the melting temperature of the solder joint above that of the indium preform but less than the solder connections, the solder joint bonding the second surface of the device to the heat-conductive pedestal; and
a structural adhesive bonding the substrate to the housing, the structural adhesive having a cure temperature approximately equal to the melting temperature of indium but less than the melting temperature of the solder joint so as to enable simultaneous curing of the structural adhesive and diffusion of the one or more alloying constituents into the indium preform;
wherein a thermally-conductive lubricant is not present between the second surface of the flip-chip device and the heat-conductive member.

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14. (original) The electronic assembly according to claim 13, wherein the solder joint contains gold or silver in an amount of about 0.1 to about 0.5 weight percent.

15. (original) The electronic assembly according to claim 13, wherein the solder joint contains one of nickel, nickel-gold alloy, tin, and tin alloy in an amount of about 0.1 to about 0.5 weight percent.

16. (original) The electronic assembly according to claim 13, wherein the solder joint consists essentially of indium, at least one of gold and silver in an amount of about 0.1 to 0.5 weight percent, and at least one of nickel, nickel-gold alloy, tin, and tin alloy in an amount of about 0.1 to 0.5 weight percent.

17. (canceled)

18. (previously presented) The electronic assembly according to claim 13, wherein the housing comprising a base member and a cover member that enclose the substrate and the flip-chip device.

19. (previously presented) The electronic assembly according to claim 18, wherein an overmold compound does not encapsulate the substrate and the flip-chip device.

20. (original) The electronic assembly according to claim 13, wherein a portion of the housing defines the pedestal.

21. – 40. (canceled)